

what way to account for the synonymy exhibited in his list is far beyond my comprehension.

I have myself long passed the conventional term of human life, and would gladly welcome the appearance of any one who would carry on the work which has been my study for more than fifty years, but not in such a fashion as this.

Gumley, Market Harborough,
March 1892.

LXVI.—*Descriptions of some new Species of Asiatic Saturniidae.* By F. MOORE, F.E.S.

1. *Antheræa pulchra.*

Male.—Varied with ochreous red on the basal area, orange-yellow along the apical border, and olive-grey on hind margins, the outer borders olive-grey; ocelli oval, with thick black outer ring, slightly protuberant at upper and lower end of the cell; submarginal band dark red, very slightly white-bordered; subbasal bands prominent, black; two transverse discal, dusky ochreous-brown, lunular fasciæ, both clouded anteriorly on the fore wing and blackish on the hind wing, the inner discal fascia being very narrow and the outer one broad.

Female.—Varied deep orange-brown; with two darker discal fasciæ as in the male; outer borders paler; submarginal band broad, with prominent white border; ocellus of fore wing protuberant at upper and lower end of the cell, the black border thickened at the lower protuberance; ocellus of hind wing less protuberant.

Expanse $5\frac{3}{4}$ inches.

Hab. Satara Hills, Bombay (*Coussmaker*).

A larger insect than the three following: distinguishable from them in the male by the broader dusky outer discal band and much narrower inner discal fascia, the latter crossing the wing outside the cell on both wings; the interspace between the subbasal dusky band and the submarginal band is also wider.

2. *Antheræa fasciata.*

Male.—Pale brownish ochreous; discal area slightly tinted

with reddish ochreous, apical border yellowish ochreous, outer borders pale olive-brown; submarginal band dusky pink and slightly whitish-bordered; ocelli small, bluntly oval; sub-basal bands, outer discal lunular band on fore wing, and discal encircling wavy band on hind wing prominently blackish; a suffused discal fascia across both wings.

Female.—Deep ochreous yellow, brightest across the disk, outer border much paler, submarginal band dusky red, narrow, and broadly white-bordered; ocelli large, oval; discal bands as in the male, prominently black.

Expanse, ♂ $4\frac{3}{4}$, ♀ $5\frac{1}{4}$ inches.

Hab. Satara Hills, Bombay (*Coussmaker*).

Distinguishable by its somewhat woolly appearance, especially observable in the female, the male having a prominent broad, dusky, lunular outer discal band on the fore wing and a prominent similar encircling discal band on the hind wing, the latter approaching nearer to the ocellus.

3. *Antheræa olivescens*.

Male and female.—Pale olive-brown, the outer borders paler; submarginal band deep purple-red, bordered with pinkish white, that on the fore wing sinuous; ocelli bluntly oval, the black ring thick in the female; subbasal band pinkish brown, white inner-bordered; a darker olive-brown suffused discal fascia crossing both wings, and a similar coloured narrower lunular fascia contiguous to the submarginal band.

Expanse $5\frac{1}{4}$ inches.

Hab. Satara Hills, Bombay (*Coussmaker*).

4. *Antheræa ochripicta*.

Male.—Reddish ochreous, with paler olive-grey borders; subbasal and submarginal band deep red, the latter slightly white-bordered; ocelli small, almost circular, talcose centre small.

Female.—Ochreous or orange-yellow, brightest across the disk; the base pale greyish ochreous; subbasal band ochreous red; submarginal band pink, prominent white-bordered.

Expanse, ♂ $4\frac{3}{4}$, ♀ 5 inches.

Hab. Satara Hills, Bombay.

Smaller than *A. olivescens*. In the male the outer discal dusky lunular band is further from the submarginal band.

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Reared from cocoons received in 1874 from Capt. G. Coussmaker.

5. *Antheræa versicolor*.

Male.— Varied deep ochreous brown; outer borders ochreous, tinged with olive; ocelli oval ($\frac{4}{7}$ in. in diameter and $\frac{6}{12}$ in length), talcose centre large; submarginal red band broad, the white outer border narrow on the fore wing and broken into dentate marks on the hind wing; an indistinct dusky subbasal band, a medial discal and contiguous lunular fascia on the fore wing. Hind wing with an indistinct dusky subbasal band extending close to and round the ocellus to the anal margin.

Female.— Ochreous or greyish brown; ocelli large, oval ($\frac{5}{12}$ in. in diameter and $\frac{8}{12}$ in length); discal area dusky brown; submarginal red band broad and broadly pink-white bordered; the discal encircling dusky band prominent and touching both upper and lower ends of the ocellus.

Expanse, ♂ 5, ♀ $5\frac{1}{2}$ inches.

Hab. Purulia, Maumbhoom, W. Bengal.

Of smaller size than either *A. mylitta* or *A. nebulosa* (of which latter species I have Hutton's typical specimens), and is distinguished by having a different shaped ocellus, the male having the submarginal red band much nearer to the ocelli and the encircling discal dusky band on hind wing touching the ocellus.

6. *Antheræa Hartii*.

Male and female.— Upperside dark purplish ochreous-brown, the base of the wings and the body being more or less reddish brown; both wings with a rounded ocellus of from two tenths to three tenths of an inch in diameter, encircled by a blackish line, with the centre talcose, the outer half being chrome-yellow and the inner half purplish red, the latter colour also extending more or less paler round the outer yellow half; crossing the middle of the wing is a more or less blackish wavy shade, which imperceptibly passes through the ocelli, and an oblique blackish, rather straight submarginal line extends halfway between the margin and the ocellus on the fore wing and at three fourths on the hind wing, this line in the female being exteriorly purplish-bordered and slightly grey-speckled towards the apex of the fore wing; in the female also the base of the costal border is likewise slightly grey-speckled; in some specimens of the female the outer border

of the hind wing is almost entirely covered with chrome-yellow scales, these yellow scales also being scattered on the border of the fore wing; cilia deep chrome-yellow.

Expanse of wings $4\frac{1}{2}$ – $4\frac{3}{4}$ inches.

Hab. Newchwang, Manchuria, N. China. In Coll. Moore.

The adult larva of *A. Hartii* (in alcohol) is 4 inches in length. Colour green, with two dorsal rows of short hairy tufts composed of a few fine divergent hairs, and two lateral rows of smaller similar tufts, one being on each segment in each series, and the two dorsal tufts on the third and fourth segment on slightly raised prominences; a smaller tuft also on each of the fore legs; at the base of the anterior tufts and the dorsal and lateral tufts is usually a sparkling gilt spot; the feet, underside, and front of head also slightly hairy; head with black spots in front and a lateral upward streak; front legs with black streaks and pads on the middle, and hind legs also black; spiracles narrow, blackish. Cocoon pale ochreous white, attached by a long slender peduncle to a twig of the food-plant, and partly enveloped with the leaves.

The natives rear the larva, in a semi-domesticated state, on oak trees, it being stated that two broods are obtained within the year.

Named after Sir Robert Hart, through whose interest specimens were collected and forwarded to Mons. Natalis Rondot.

7. *Antherœa borneensis*.

Female.—Upperside dark ochreous yellow. Fore wing with grey-speckled costal border; a prominent ordinary narrow, outer discal, transverse, blackish band with white-speckled pink outer border; a broad, very bluntly ovate ocellus with small talcose centre, the inner half of the ocellus being light red, with traversing incurved white line, the outer half greyish purple and externally edged by a black line, which is slightly thickened at its upper end and then extends to the costal vein; a subbasal, transverse, indistinct, slender, nearly erect pale red line, and a darker similar short line crossing the cell; a red broad streak also within the cell from near its base and extending beyond the transverse line; a narrow, indistinct, darker ochreous fascia crossing the middle of the wing and passing through the outer edge of the ocellus. Hind wing with a similar very bluntly ovate ocellus having a talcose centre, and the upper end of its black outer line terminating in a large yellow-centred longitudinal streak; a prominent outer discal, narrow, transverse, blackish band as

on fore wing, extending close to the ocellus; a red, narrow, subbasal angulated line from inner margin extending above and round the upper part of the ocellus; a darker ochreous medial fascia from below the ocellus to inner margin. Thorax grey-speckled; head, antennæ, and legs dark ochreous; eyes brownish; thorax and abdomen ochreous yellow.

Expanse $6\frac{1}{2}$ inches.

Hab. S. Borneo. In coll. F. Moore and Singapore Museum.

This species is nearest allied to *A. Helferi*, the female of *borneensis* differing on the fore wing in the more prominent transverse outer discal line, a larger ocellus having a talcose centre (the ocelli in *Helferi* being blind), in the red dash within base of the cell, and in the darker ochreous indistinct middle fascia extending across the wing through the outer edge of the ocellus (in *Helferi* it extends midway between the ocellus and discal line). On the hind wing *borneensis* also differs in the prominent outer discal line, larger and talcose-centred ocellus, and the medial dark ochreous fascia (not present in *Helferi*). From the allied *A. yamamai* of Japan, the female *borneensis* differs on the fore wing in the less obliquity of the outer discal line, differently shaped ocellus, the red dash at base of the cell, and different position of the medial ochreous fascia (which in *yamamai* extends through the middle of the ocellus); on the hind wing in the different curvature of the outer discal line and smaller as well as different-shaped ocellus.

8. *Anthercea Ridlyi*.

Female.—Upperside with the inner area dark ochreous yellow, clouded with reddish ochreous, the outer borders broadly dark purplish brown. Both wings have a large rounded ocellus with a broad talcose centre, the inner border of the ocellus being crimson with white traversing line, the outer border olive-brown, the encircling line black and that on the fore wing thickened at base of the subcostal branch; crossing the discal area are two reddish-black sinuous lines, the inner line broadest and touching the ocelli; a medial broad fascia and two subbasal angulated fasciæ; costal border of the fore wing and front of thorax grey-speckled; head, body, and legs reddish ochreous; antennæ brown.

Expanse, ♀ $5\frac{1}{2}$ inches.

Hab. North Borneo. In coll. F. Moore and Singapore Museum.

This species is allied to *A. larissa* (Westwood, 'Cabinet

of Oriental Entomology,' pl. xxiv. fig. 1) of Java. It is distinguishable from the same sex of that species by the very considerable darker colour, broader transverse sinuous markings, and larger ocelli.

9. *Antheraea surakarta*.

Male.—Upperside pinkish brownish-ochreous. Fore wing with grey-speckled costal border; with a broad suffused brownish-ochreous anterior shade before the apex; a narrow dusky excurved subbasal line, a short incurved similar line crossing the cell near its base, an oblique inner discal similar line commencing from below the apex, which is lunular anteriorly and sinuous posteriorly; beyond this line is a conspicuous ordinary pink-bordered, dusky, discal line, which is almost straight; ocellus small and bluntly oval, a quarter of an inch in vertical diameter, outwardly lined with black, the talcose centre being narrow. Hind wing with an indistinct dusky angulated subbasal line, which almost imperceptibly curves below the anterior margin and returns sinuously across the discal area, beyond which is an indistinctly defined ordinary pink-bordered, sinuous, outer discal line; ocellus small, one quarter of an inch in vertical diameter, rounded, talcose centre very minute.

Female.—Upperside ochreous yellow; costal border grey-speckled. Fore wing with a pale whitish-bordered subbasal line and an outer discal, whitish-bordered, slender, pinkish line; an indistinct darker ochreous narrow shade crossing the middle of the wing through the ocellus; the ocellus very large, irregularly elongated outwardly, three quarters of an inch in longitudinal length, brownish ochreous, black-lined outwardly, talcose centre large and longitudinally oval, and crossed by the discocellular veinlet. Hind wing with a darker ochreous narrow shade crossing the middle; outer discal pinkish line with narrow lunulated outer border; ocellus longitudinally bluntly oval, ochreous brown, with oval talcose centre and black outer line. Body ochreous yellow; collar grey; head and front legs bright ochreous yellow; antennæ reddish ochreous.

Expanse, ♂ 5, ♀ 6 inches.

Hab. Java (*Horsfield*). Type in coll. British Museum.